## **AMENDED CLAIMS**

[Received by the International Bureau on 16 May 2005 (16.05.05): original claims 1-29 replaced by amended claims 1-21 (3 pages)]

- The use of a peptide comprising all or an immunogenic part of the amino acid sequence designated SEQ ID NO 6 in the manufacture of a vaccine to stimulate an anti-cancer immune response against COA-1 (SEQ ID NO 2), wherein the immunogenic part of the sequence is processed and expressed by antigen presenting cells in association with sympathetic MHC class II molecules.
- Use according to claim 1, wherein the immunogenic part of the sequence comprises 8 or more contiguous amino acid residues of SEQ ID NO 6.
- Use according to claim 2, wherein the immunogenic part of the sequence comprises 10 or more contiguous amino acid residues of SEQ ID NO 6.
- Use according to any preceding claim, wherein the immunogenic part of the sequence comprises SEQ ID NO. 9 at the N-terminus and/or SEQ ID NO. 10 at the C-terminus.
- Use according to claim 1, wherein the immunogenic part of the sequence consists of SEQ ID NO 6.
- Use according to any preceding claim, wherein the immune response is stimulated against Colorectal Cancer cells.
- 7 Use according to any preceding claim, wherein the peptide is an oligopeptide.
- Usè according to claim 1, wherein the MHC class II molecules are the HLA DRβ1\*0402 and/or HLA DRβ1\*1301 alleles.
- Use according to any preceding claim, wherein the vaccine further comprises PBMC's (Peripheral Blood Mononuclear Cells) either expressing the HLA DRβ1\*0402 and/or the HLA DRβ1\*1301 alleles.
- Use according to any of claim 1-8, wherein the vaccine further comprises

  Dendritic Cells, pulsed with a peptide comprising all or an immunogenic part of the
  amino acid sequence designated SEQ ID NO 6 or transfected with polynucleotides
  encoding said peptide, the Dendritic cells either expressing the HLA DRβ1\*0402
  ard/or the HLA DRβ1\*1301 alleles.

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11 A vaccine comprising a peptide, as defined in any preceding claim.

- 12 A vaccine according to claim 11 comprising a suitable carrier.
- A vaccine according to any of claims 11-12, comprising the peptide and PBMC's expressing a sympathetic MHC Class II allele therefor.
- 14 A vaccine according to claim 13, wherein the MHC Class II allele is the HLA DRβ1\*0402 and/or the HLA DRβ1\*1301 allele.
- A method for stimulating immunity against colorectal cancer, comprising stimulating the production of antibodies against a peptide, as defined in any of claims 1-12.
- 16. A method according to claim 15, wherein immunity is stimulated in the patient in conjunction with PBMC's allogeneic or autologous for at least one sympathetic HLA-II allele capable of presenting all or an immunogenic part of the amino acid sequence designated SEQ ID NO 6 in an immunogenic manner.
- 17. A method according to claim 16, wherein the allele is selected from HLA DRβ1\*0402 and HLA DRβ1\*1301.
- 18. A method according to any of claims 15-17, wherein the patient has PBMC's autologous or allogeneic for at least one sympathetic HLA-II allele capable of presenting the COA-1 epitope in an immunogenic manner, the method comprising administering a vaccine comprising the immunising portion of COA-1, or a precursor therefor, as defined in any preceding claim, to the patient.
- 19. A method for stimulating immunity to colorectal cancer in a patient, said method comprising
- i) isolating PBMC's or their progenitors from the patient and transforming said cells with at least one sympathetic HLA-II allele capable of presenting the COA-1/epitope in an immunogenic manner,
- ii) introducing the transformed PBMC's back into the patient, and
- iii) administering a vaccine comprising the immunising portion of COA-1, or a precursor therefor, as defined in any of claims 1 to 12, to the patient.
- 20. A method according to claim 19, wherein the immunising portion of COA-1, or a precursor therefor, is administered with the transformed PBMC's.

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Use according to any of claims 1-4, wherein the immune response is stimulated against melanoma cells.